

# CALIFORNIA'S NATURAL GAS CONTEXT

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December 14, 2004



# Today's Topics

- California's unique NG situation
- NG demand
- NG supply
- Options for consideration



# California's Unique NG Situation

- Good news
- Bad news
- Good news



# California's Unique NG Situation

- Good news:
  - Current reliability good
  - Recent infrastructure improvements help
  - Current NG storage inventories good
  - Broad public energy dialogue more focused on NG issues
  - CA has aggressive EE and renewable programs
  - CA starting new NG R&D program
  - Greater NG use has helped “clear the air”



# California's Unique NG Situation

- Bad news:
  - NG prices are much higher than before
  - NG is the dominant fuel for power plants
  - CA imports 85% of its NG
  - CA is at the end of the pipeline
  - CA competes with all other major US markets for NG
  - The US supply/demand outlook is pessimistic

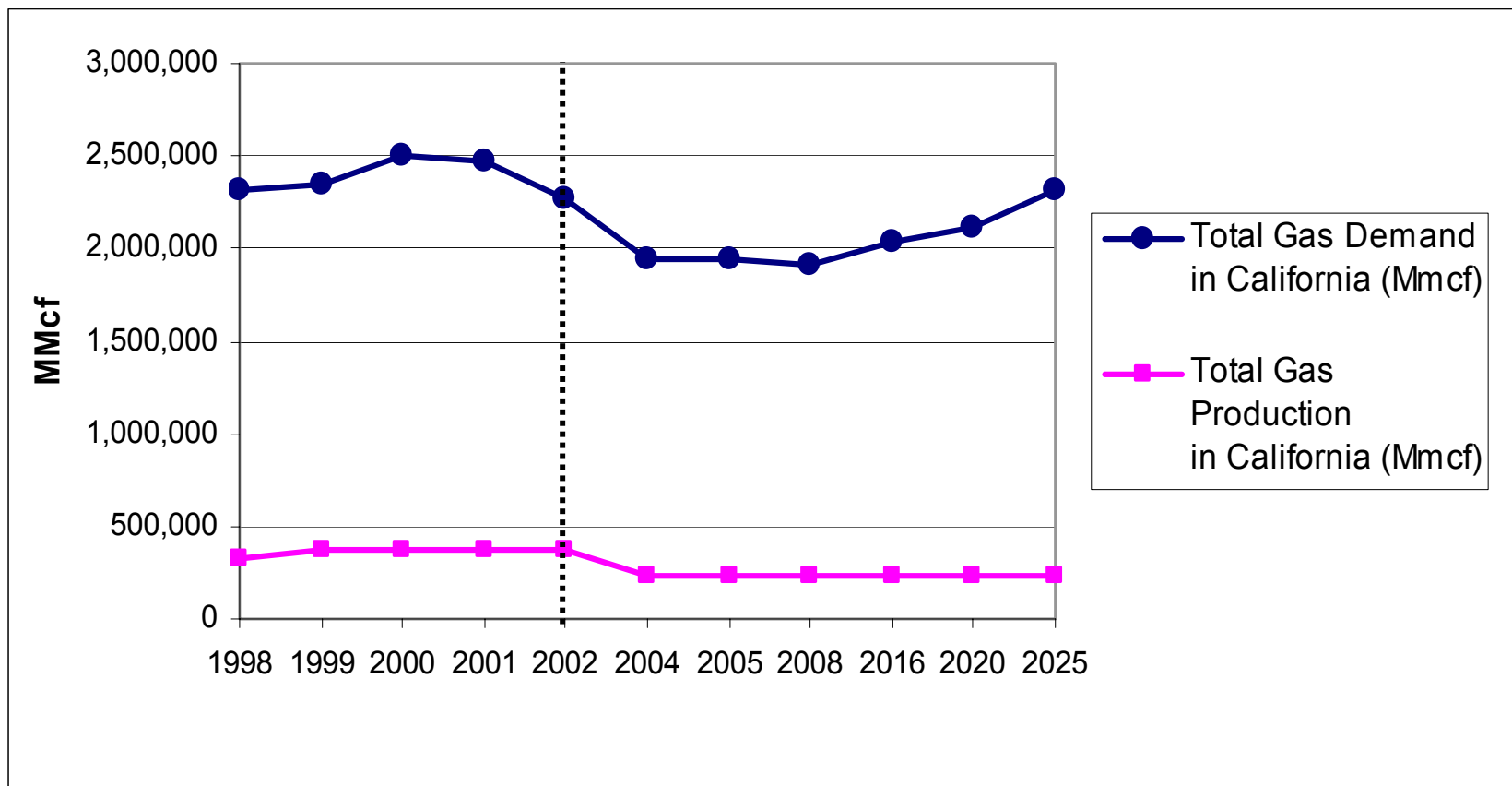


# California's Unique NG Situation

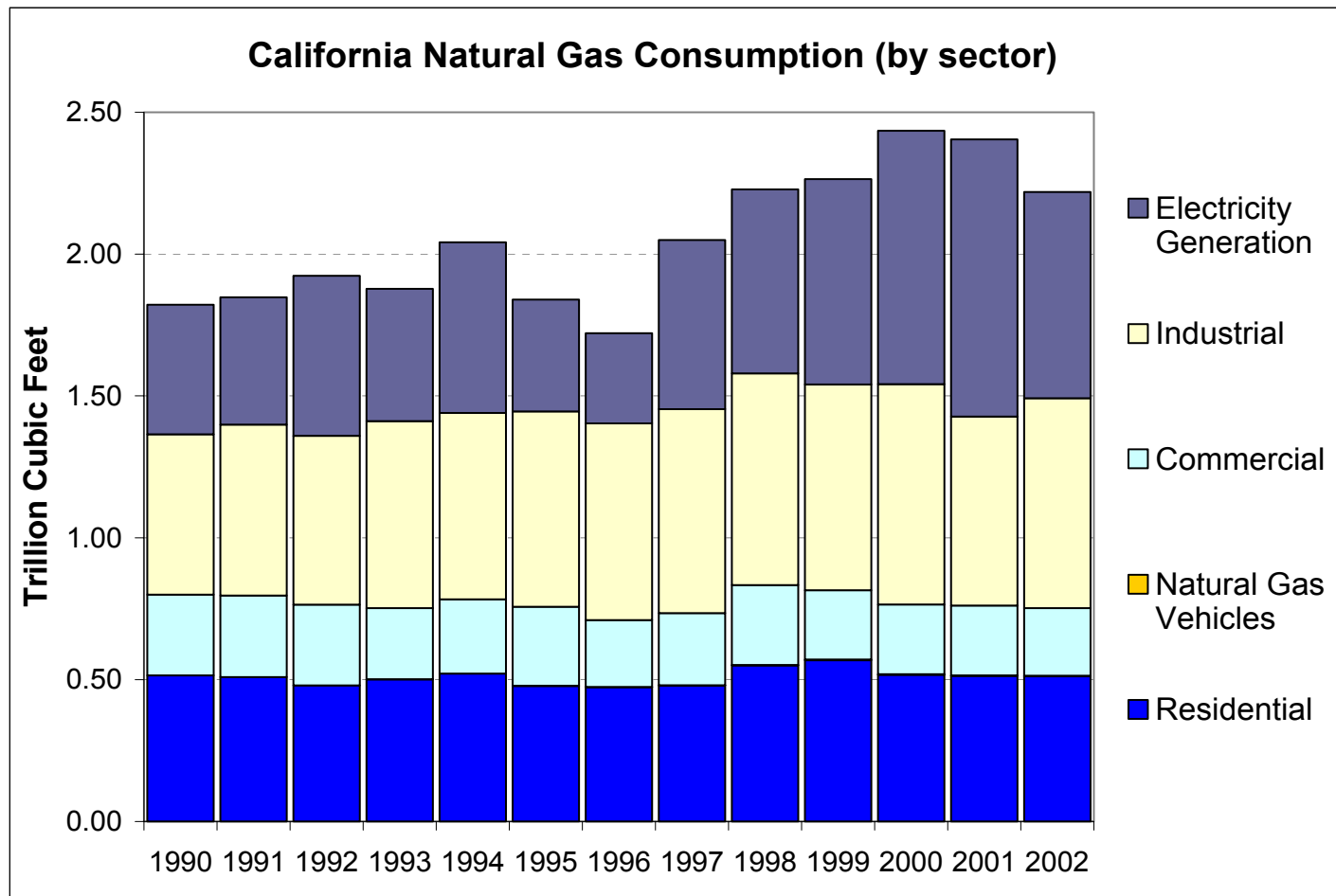
- Good news:
  - CA has several options available to it
    - ◆ Short term
    - ◆ Mid term
    - ◆ Long term
  - Policy makers are focused on improving California's situation



# California NG Demand

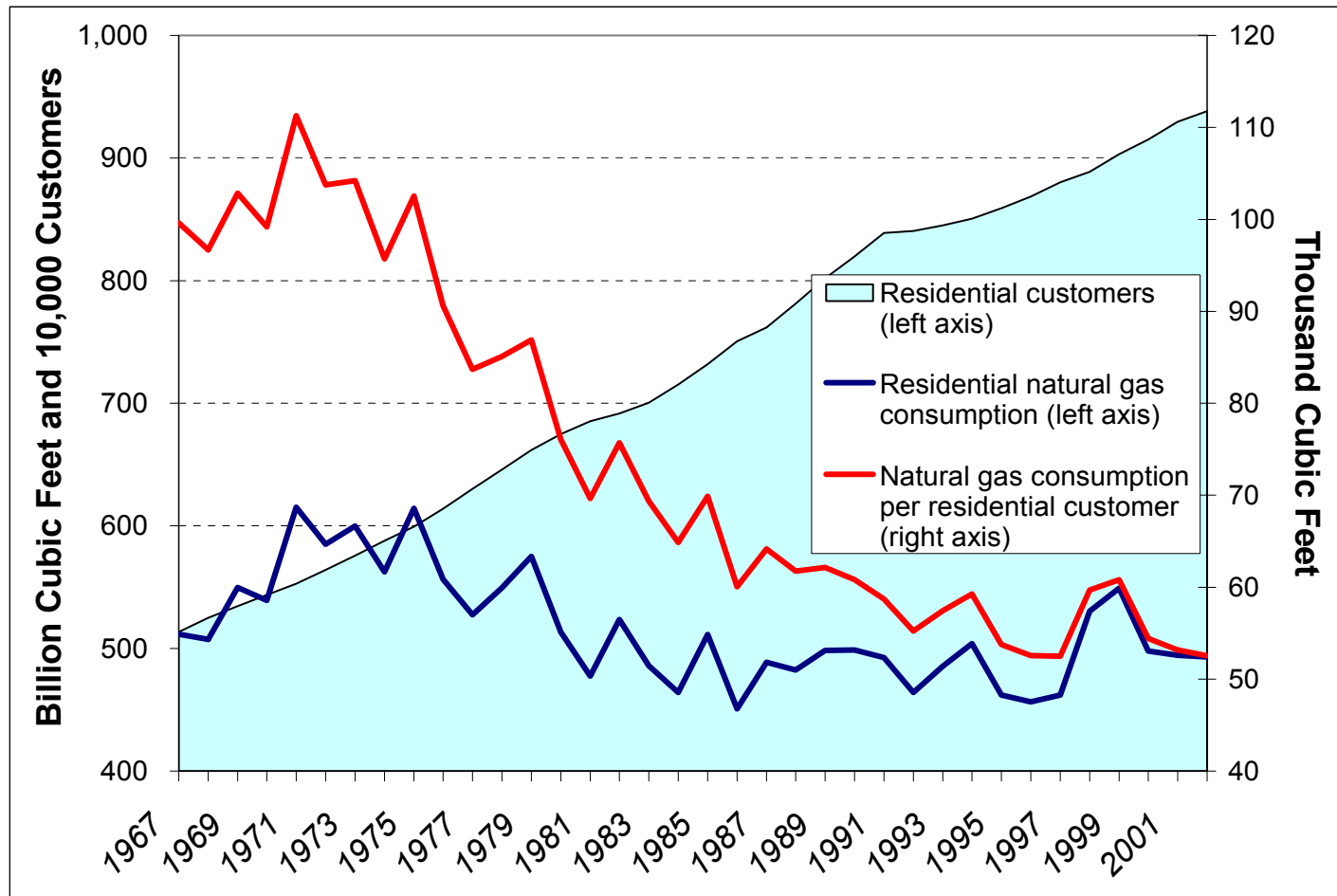


# CA NG Demand



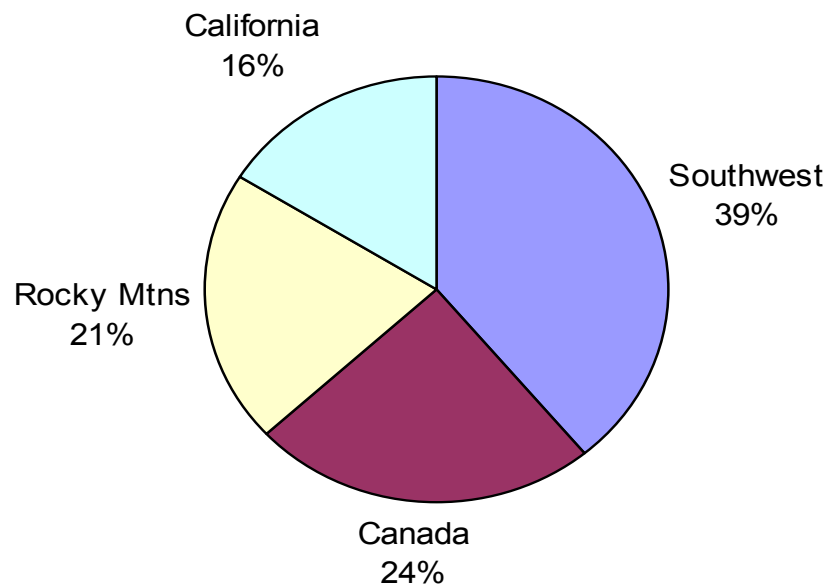


# CA Efficiency Gains

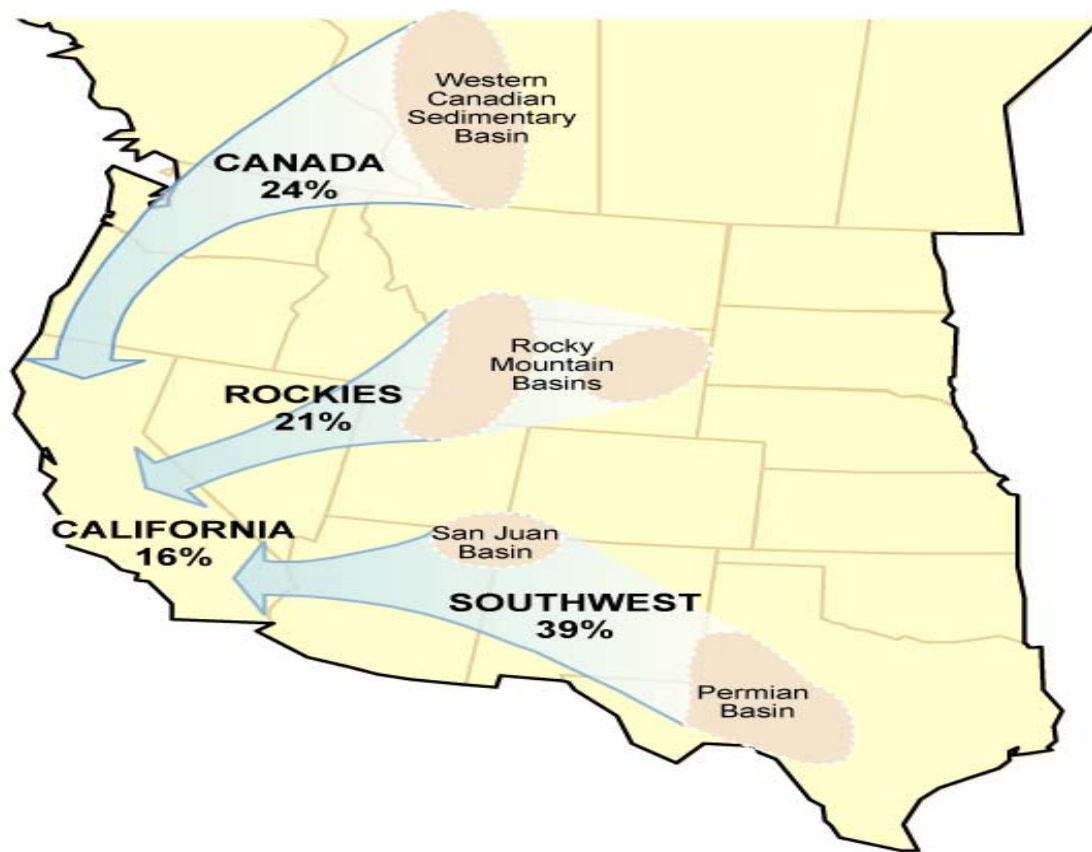


# NG Supply

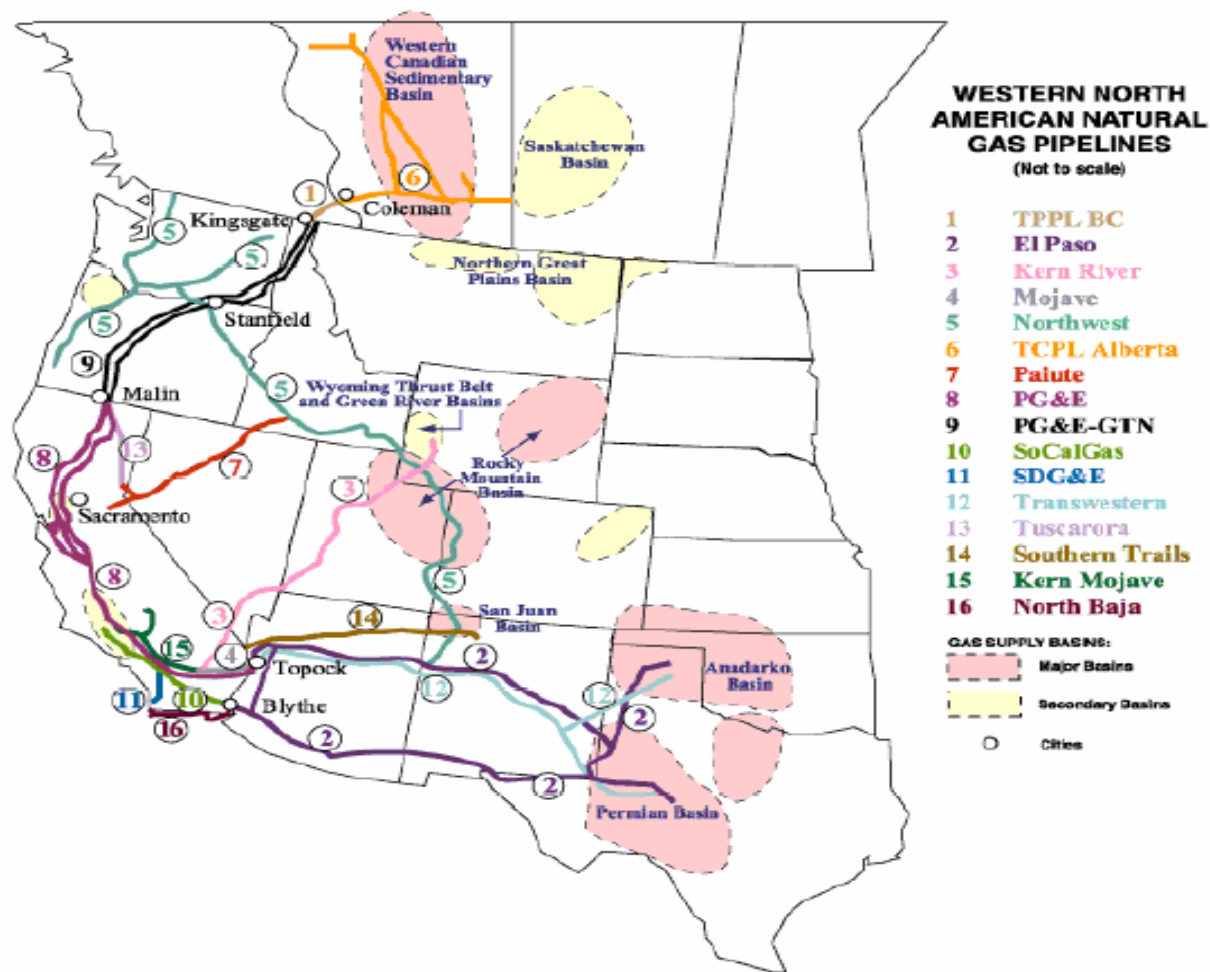
## 2003 California Natural Gas Supply (5,962 MMcfd)



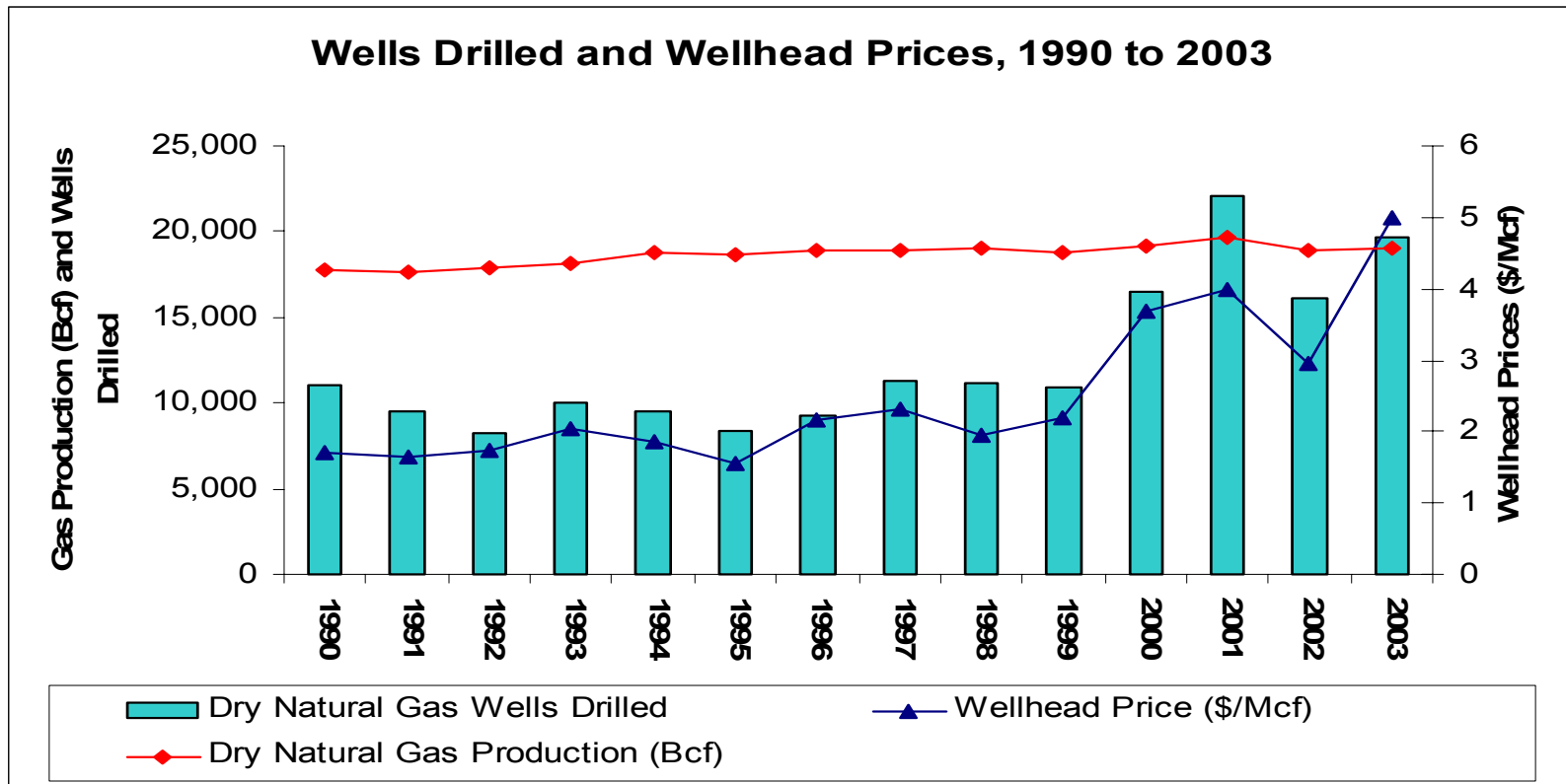
# CA NG Supply Sources



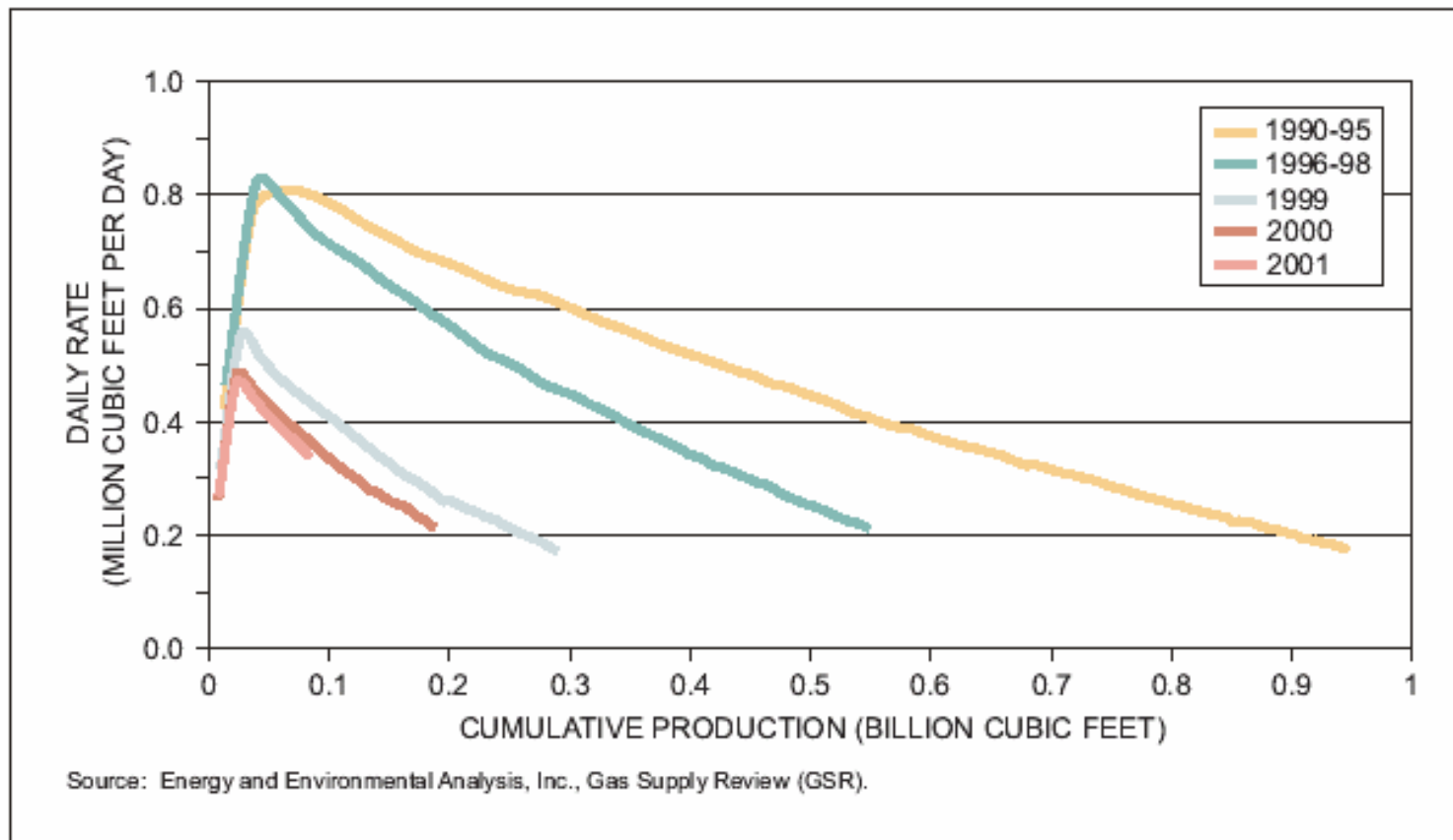
# California's NG Supply System



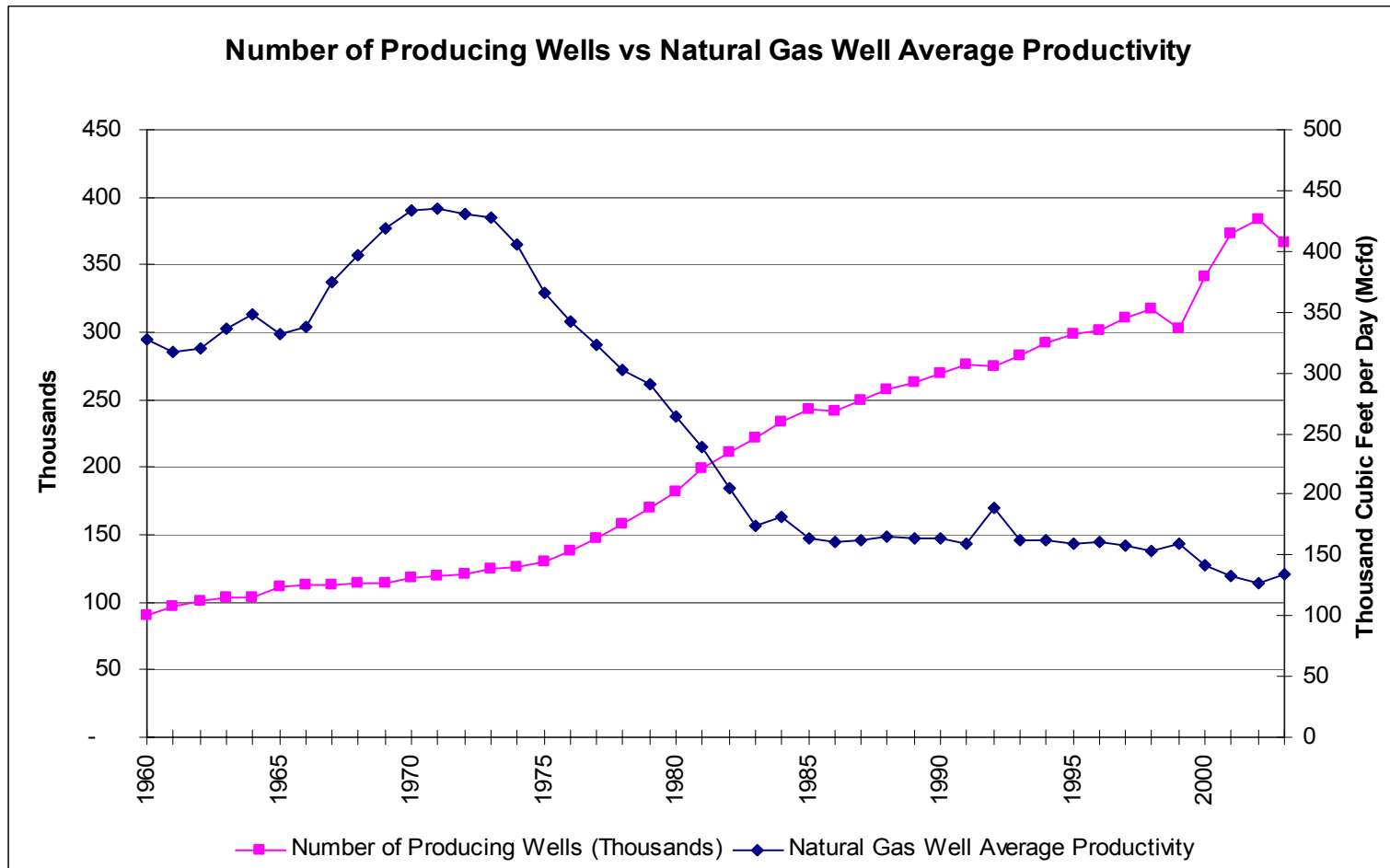
# US NG Prices, Drilling, and Production



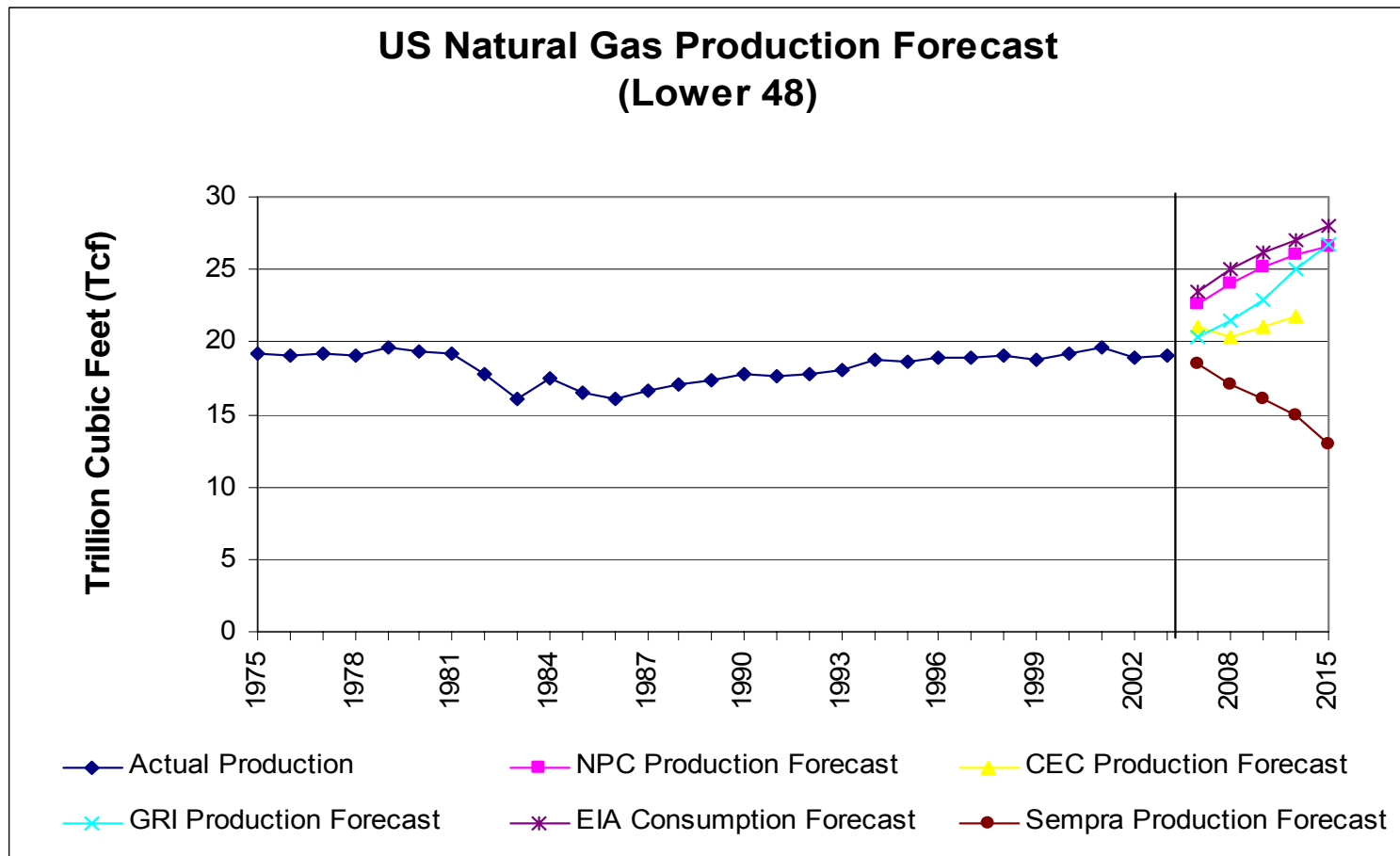
# US Individual Well Productivity Declines



# US Well Productivity Declines

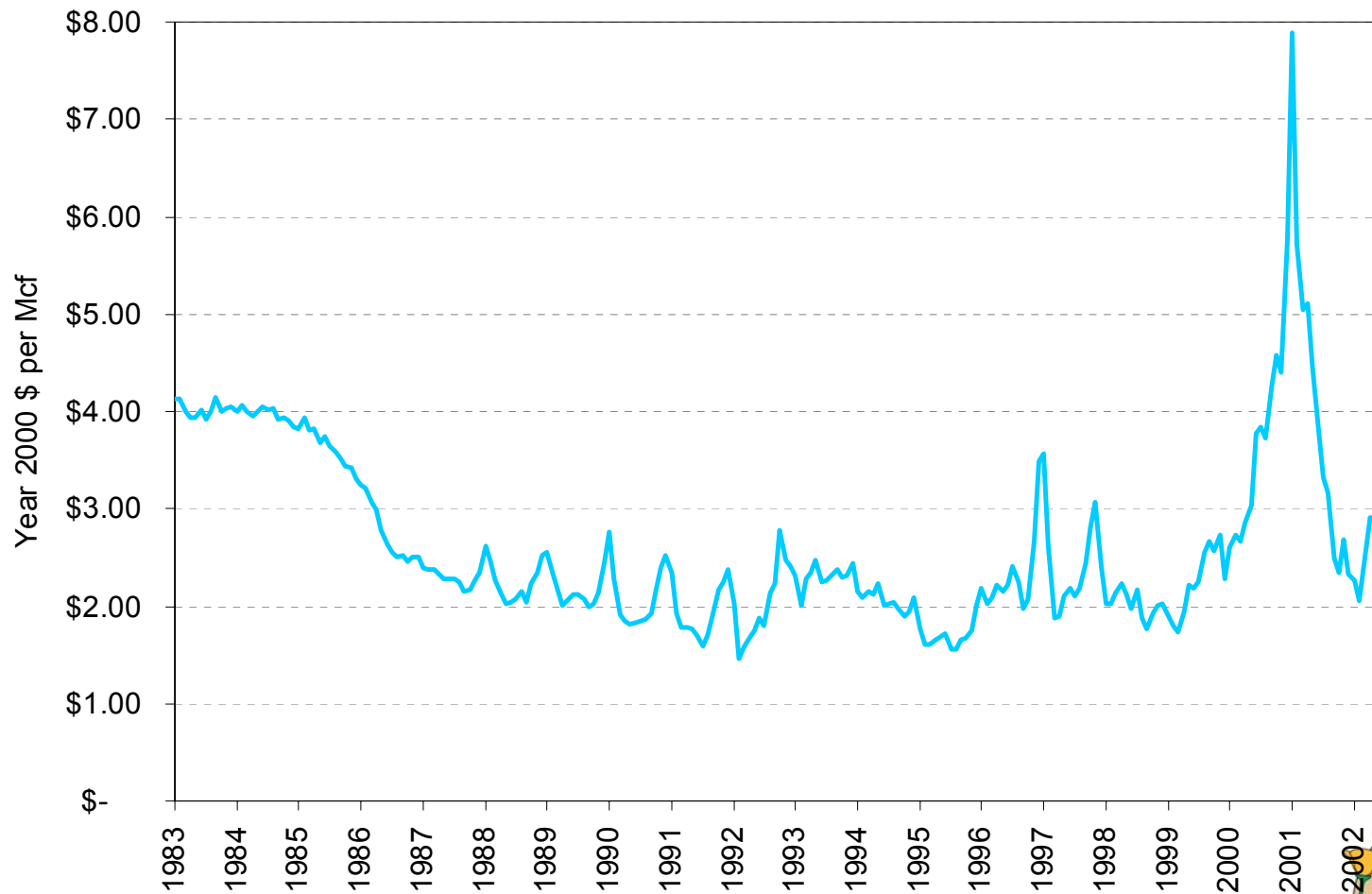


# US NG Production Forecasts

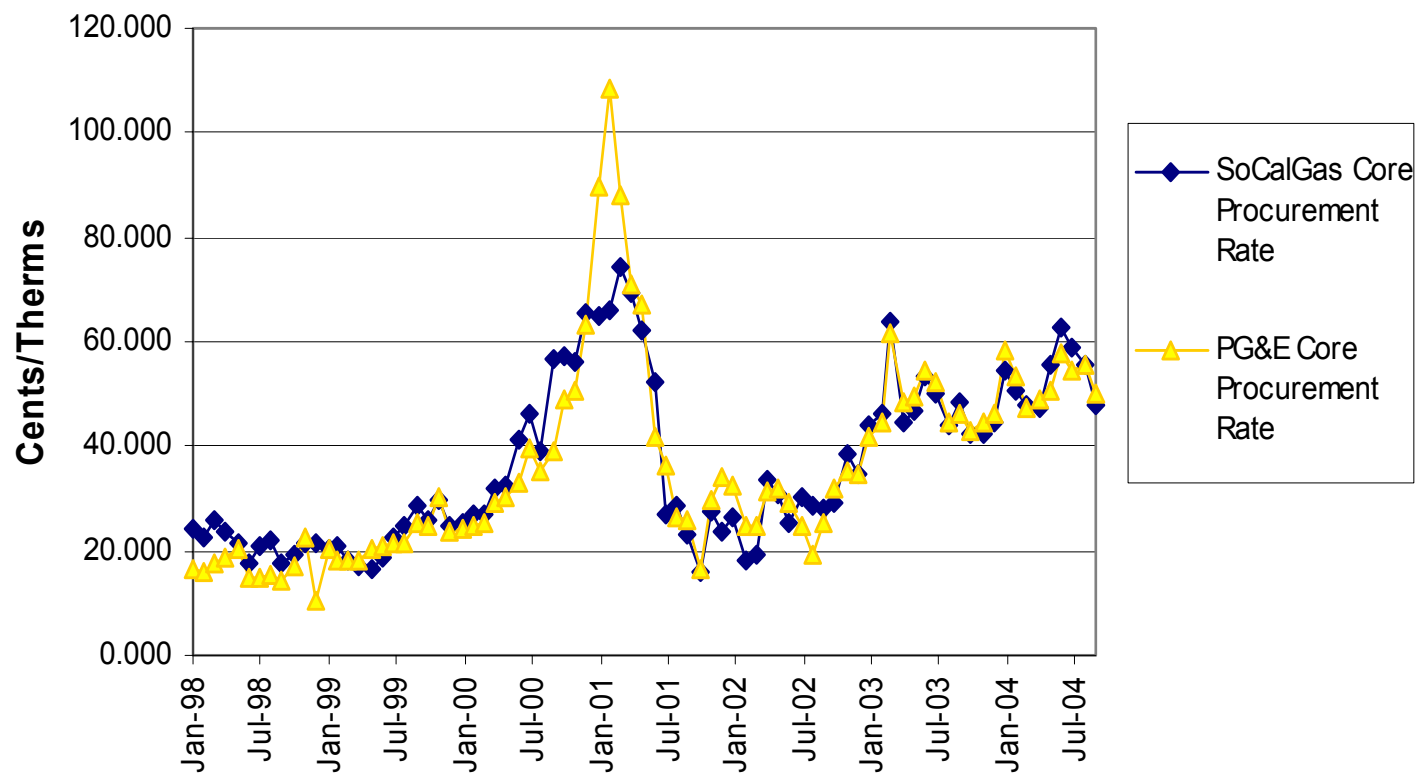




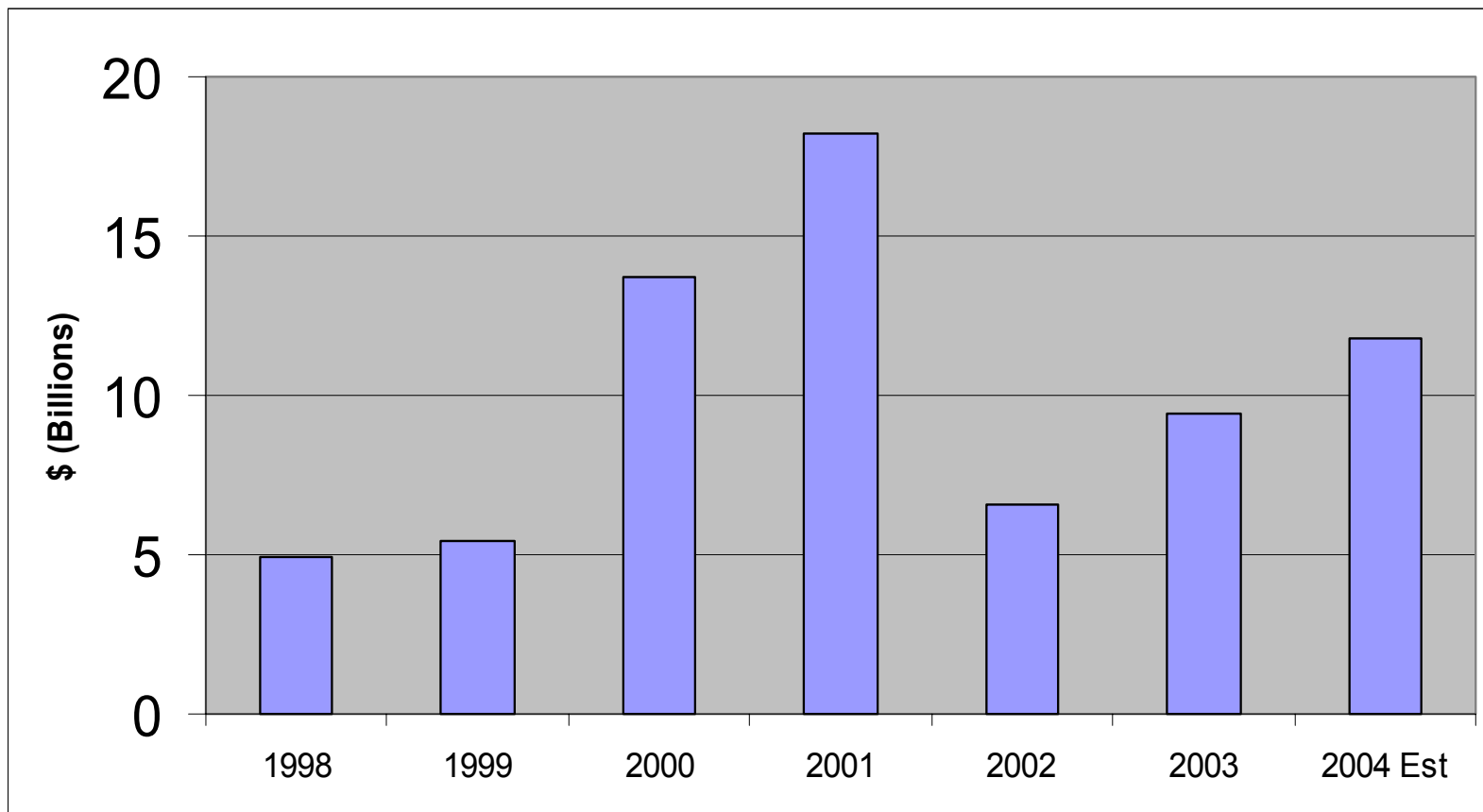
# Historical Wellhead Prices in the Lower 48 – Monthly Averages



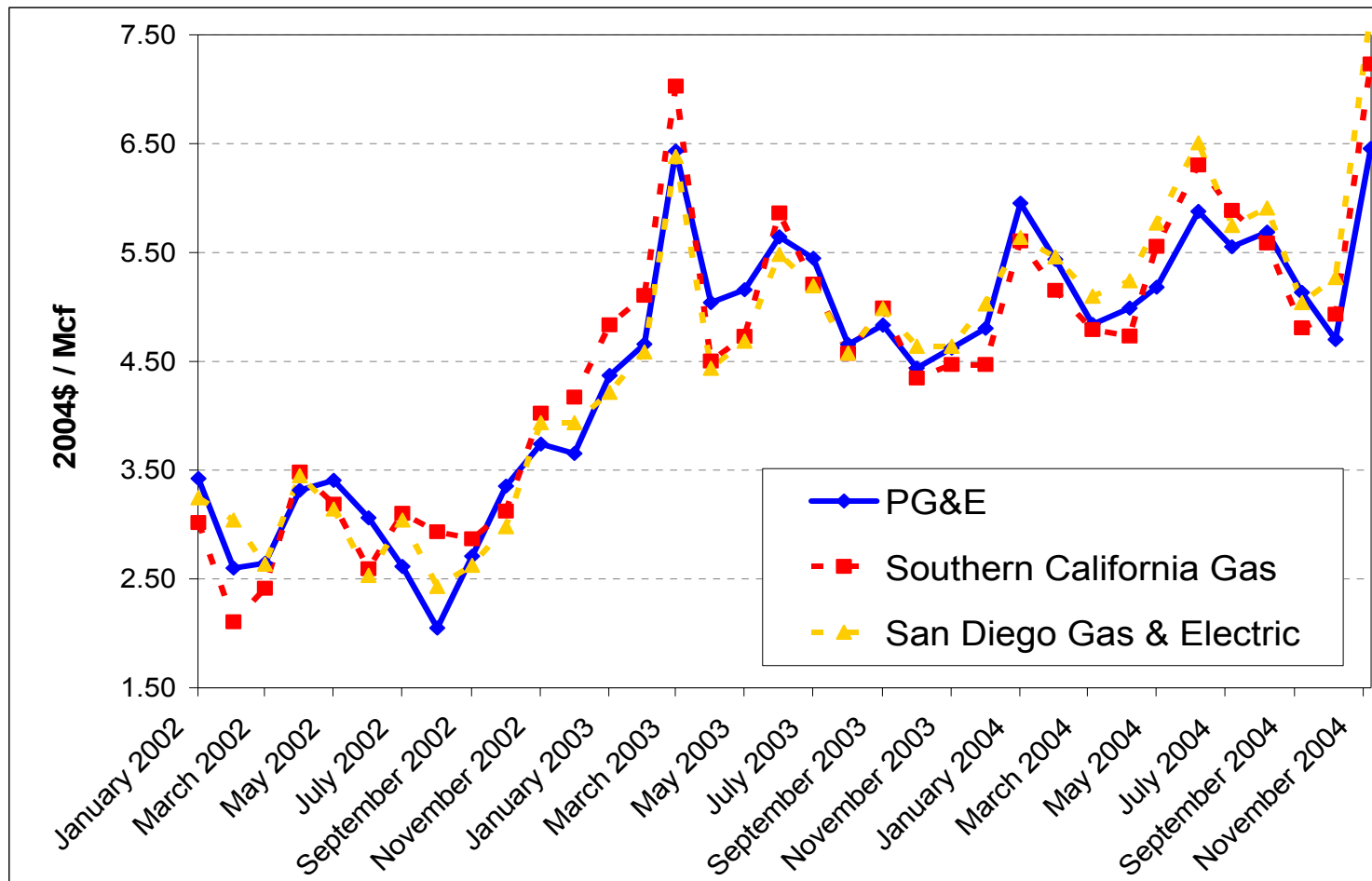
# CA Cost of NG



# CA Consumers' Cost of NG



# CA NG Prices



# CA Consumers' Cost of NG

- At \$5/mmBtu, California's pay about \$11 billion for just the commodity.
- Actions that result in a 10% savings will keep an extra \$1 billion in our state.



# Options for Consideration

- Energy efficiency—NG programs
- Energy efficiency—NG standards
- Energy efficiency—electric
- Renewable energy programs
- Distributed generation
- New sources of NG supply
- Additional NG infrastructure



- Questions?

